BenQ.com

BenQ PE8720 Digital Projector
Home Cinema Series

Model	PE8720
Native Resolution	1280 x 720 (16:9)
Projection System	DLP™
Brightness	1000 ANSI lumens
Lamp	250W, 2000/3000 hours (Normal/Economic Mode)
Contrast Ratio	10000:1
Weight	20 lb (9 kg)
Audio Noise	25/23 dB (Normal/Whisper Mode)
Resolution Support	640 x 400 to 1024 x 768
Dimension (WxHxD)	19 x 7.6 x 15.4 inches (492 x 195 x 393 mm)
Image Size	23.5"~300"
Throw Ratio	100" @4m (100"@13.12 feet)
Zoom Ratio	Motorized zoom, 1.35:1
Lens	F=2.4 to 2.8, f=32.1 ~ 43 mm
Color	Full 16.7 million color palette
Aspect Ratio	Native 16:9 (5 aspect ratio selectable)
Horizontal Frequency	15 ~ 75 kHz
Vertical Scan Rate	50 ~ 85Hz
Projection Position	Front/rear, table/ceiling
Input Terminals (PC)	Analog RGB: BNC x 3
Input Terminals (Video)	Digital: HDMI (with HDCP) x 1 Composite Video: RCA x 1 S-Video: Mini Din 4 pin x 1 Component Video 1: BNC x 5 Component Video 2: RCA x 3
Input Terminals (Audio)	-
Control Terminals	RS232 serial control: Mini Din 9 pin x1
Output Terminals	-
Video Compatibility	NTSC/PAL/SECAM
Auto Switching Power Supply	100 to 240 VAC, 50 to 60 Hz

Power Consumption	Max 320W
On-Screen Display Language	English/French/German/Italian/ Spanish/Japanese/Russian/Dutch/ Simplified Chinese/Traditional Chinese
Preset Modes/Application Modes	Cinema Mode Home Theater Mode Family Room Mode Photo Mode Gaming Mode
Functions	• TI Darkchip3 DMD • Professional AV input (HDMI) • HDTV compatible (YPbPr) • Dust proof with Air-Filter • Powered lens shift • Powered focus • Powered zoom • Faroudja DCDi processing • BenQ proprietary Senseye technology • PIP, POP • User memory setting • Motorized IRIS adjustment • 3D Color Management • HD ready
Accessories (Standard)	User's manual Remote control AAA batteries Warranty information booklet PWR cord Component cable Micro dust filter

Accessories (Optional)

Ceiling mounting kit (59.J0B02.001)

Spare lamp kit (59.J0B01.CG1)

VGA-BNCx3 cable (50.J0C19.501)

Micro dust filter (47.J0B05.001)

Remote control (56.26J0B.001)

Projection Size

Screen Size (inch)	50"	70"	90"	110"	130"	150"
Projection Distance (m)	1.99 ~ 2.70	2.79 ~ 3.79	3.59 ~ 4.87	4.38 ~ 5.95	5.18 ~ 7.03	5.98 ~ 8.11

Contrast Your Viewing Experience with Clarity and Depth of Vision

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DLP™ technology by Texas Instruments offers crystal clear images with superior quality.

Dealer's Stamp

BenQ
Enjoyment Matters

senseye™
Human vision technology

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Specifications subject to change without notice. Doc. No:PRJ-PE8270-BR-EN0509-V1

As sensitive as the human eye.

Introducing a projector that uses a technology you can believe in. Your eyes. For the first time, you can enjoy more vivid and colorful video with technology that exploits the true potential of human vision. BenQ PE8720, the projector with Senseye technology, takes home projector to a new level with the world's highest contrast ratio (10000:1). It delivers a more crisp, deeper, clearer, and true-to-movie video performance. So when only the best will do, you can employ BenQ to deliver a superior cinematic experience fit for the most discerning of home cinema connoisseurs.

Senseye™

Projector Engine

Perfecting the 4 elements of ultimate display performance.

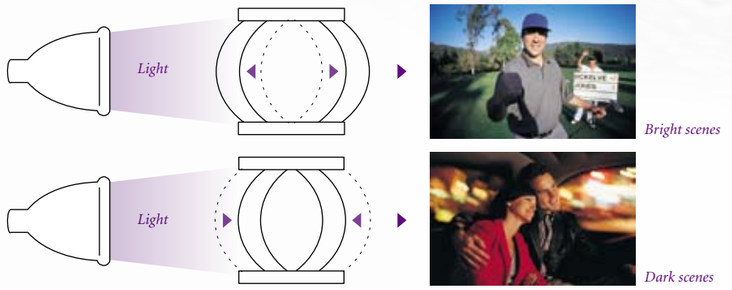
Contrast Enhancement

Cinema Class Contrast Ratio (10000:1)

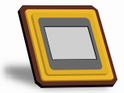
BenQ's proprietary Senseye™ Contrast Enhancement technology delivers deeper, richer and clearer high-definition visuals by implementing Advanced Continuous Electronic Iris and DarkChip3 DMD.

Advanced Continuous Electronic IRIS

Advanced Continuous Electronic Iris utilizes a variable lens aperture that increases contrast performance to a cinema-class, ultra-high 10000:1 ratio and optimizes light intensity for bright and dark scenes.



DarkChip3



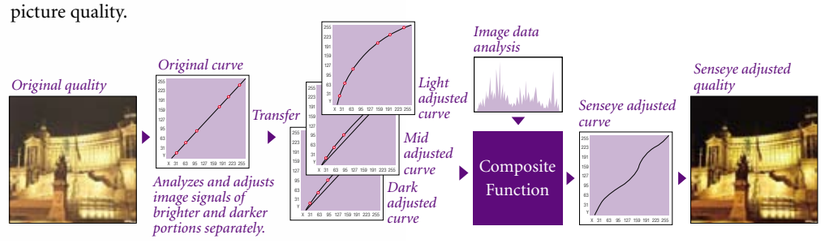
Texas Instrument DarkChip 3 is the latest generation DMD (Digital Micromirror Device) technology. TI's advanced chipset decreases the scattering of light, significantly boosting image contrast for superior dark scenes.

Say Goodbye to Inferior, Flat Video Images

As with human vision, Senseye automatically analyzes image signals and adjusts the quality of bright and dark portions separately. That means dark images appear darker, and bright images appear brighter without sacrificing color saturation.

Senseye Contrast Enhancement

Dark portions look darker and bright portions look brighter producing a smoother, more film-like picture quality.



Motion Optimization

Live Action Delivered Flawlessly

DCDi by FAROUDJA

Senseye Motion Optimization raises the picture quality of the PE8720 projector to new heights. One of the key factors in flawless live action is the processing of the video from its native interlace form to high quality progressive scan data.

The PE8720's Angle-Motion Compensation completely surpasses previous models. It removes stair-stepping on moving diagonal lines.The result is no jagged edges, natural-looking and flowing moving images.

To optimize motion quality even further, Senseye incorporates Intelligent Progressive Scan, a huge leap in video picture quality that makes it possible to recreate images with cinema-like quality. Senseye intelligently detects which areas have motion and which areas do not, and then processes them differently to create smoother motion. Static areas are meshed and areas where motion is detected are treated with a proprietary filtering technique resulting in very high quality, progressive scan images.

Stair-stepping

Angle Motion Compensation removes stair-stepping on moving diagonal lines.

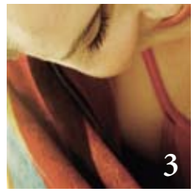
Jagged vertical edges

Intelligent Progressive Scan eliminates jagged vertical edges to deliver smooth and flawless images.

Color Enhancement

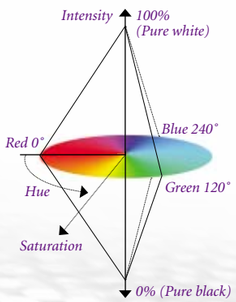
Vivid True-Color Reproduction

Equipped with Senseye Color Enhancement, the PE8720 enables the subtlest of hues such as natural pastels and skin tones to be accurately reproduced delivering brilliant, true-to-life color. **3D Color Management** not only corrects hue and saturation levels but also color intensity for realistic picture quality. **Specialized Color Wheel Coating** delivers better color saturation on Red and Blue than standard RGB (sRGB) without sacrificing green. **10-bit image processing** for eye-catching imagery. Real 10-bit color processing presents over 1.07 million colors. This means color layers are adjusted to provide enhanced image quality and the latest in adaptive de-interlacing for stunning video performance.

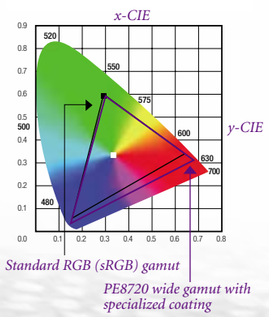


Golden Ratio Color Wheel and its specialized coating delivers high-grade color reproduction and more natural flesh tones.

3D Color Management



Specialized Color Wheel



Senseye™ 10-bit processing

Conventional 8-bit processing

Senseye™ 10-bit processing

Clarity Optimization

Crystal Clear Across the Entire Screen

Senseye Clarity Optimization reduces picture noise so images remain crystal clear across the entire screen. Image "noise" can be detected and separated into different levels. Clarity Optimization then distinguishes these different levels and then applies the correct **Adaptive Noise Reduction** solution so noise reduction can be achieved without over-sharpening or clarity loss. All in all, this process significantly reduces noise reduction resulting in super crisp video images.

Human eyes are more sensitive to green than any other color, which is why green dot noise can be commonly seen in darker movie scenes. The PE8720's **8-segment Color Wheel** with an advanced **NDG filter** minimizes green dot noise, improving picture detail for uncompromised image viewing.

The resolution of BenQ's exclusive **high resolution lens** is higher than the industry standard, making each pixel appear clearer and more life-like for an overall display integrity.

NDG filter segment

The 8-segment color wheel with NDG filter reduces green dot noise commonly found in darker movie scenes.

Adaptive Noise Reduction

Sharp portionwithout noise

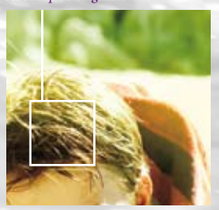
Image noise levels vary, even within the same picture.

Over-sharpening

Without Senseye

Over-sharpening occurs with the removal of noise.

As sharp as original.



With Senseye

Senseye detects different noise levels and removes noise by applying Adaptive Noise Reduction. No over-sharpening occurs.

More Power Features of the PE8720

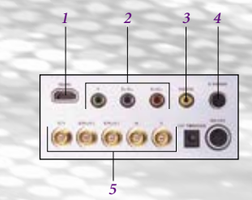
One-Touch Operation for the Best Setting in Any Occasion

At the touch of a button, the PE8720 smart technology intelligently adjusts color, lighting levels and Advanced Electronic IRIS for 5 frequently-used home applications:

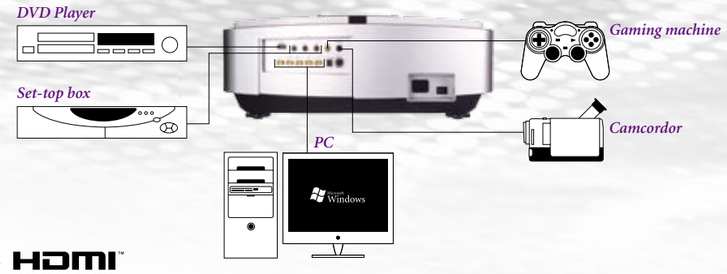
Preset Modes	Setting	Application
Cinema	The best in black detail, stunning color reproduction, and low brightness.	For viewing movies in a completely dark room.
Home Theater	Good in black detail, good in color reproduction, and low brightness.	For viewing movies in a darkened room. (curtains closed, but some residual light)
Family Room	• High brightness with strong color saturation in bright room. • Show more details in white rather than in black.	For watching TV and animation in a brighter room.
Photo	Good color reproduction with decent brightness.	Makes photos more distinctive and sharp.
Gaming	Strong in each color (RGBY) to deliver saturated color with decent brightness.	For video games.

An Enjoyment Epicenter

The PE8720 is designed with every possible connection in mind. You can connect any device for maximum digital pleasure.



	Input & Output	Connecting devices
1	HDMI	DVD player, digital TV, set-top box, etc.
2	Component (RCAx3)	DVD player, digital TV, set-top box, etc.
3	Composite video (RCA x1)	DVD player, camcorder, gaming machine
4	S-video	DVD player, camcorder, gaming machine
5	RGB/HDTV (BNCx5)	DVD player, digital TV, home theater PC



HDMI

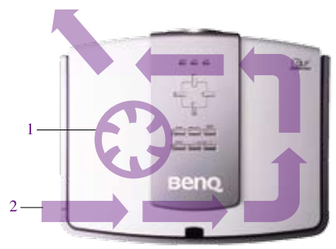
- HDMI is the only interface that can carry both uncompressed high-definition video and uncompressed multi-channel audio in all HD format up to 1080p. This translates into the highest quality video and audio-seen and heard-direct from the source.
- Most digital devices still rely on analog interfaces, which are the weak link in the chain affecting the ultimate image quality of the content. Maintaining the integrity of the digital signal from device-to-device is key to providing the highest quality home theater experience.
- Better compatibility with future advanced video devices since HDMI is becoming increasingly popular.

Customizable 6 Color Settings

Whatever your eyes desire! Specifically developed for improving individual viewing experience, the PE8720 offers users direct, independent six-color adjustment of primary (RGB) and secondary (CMY) colors. When changing each color preference other colors are not affected. Making your reds redder, blues bluer - it's your call!

Whisper-Quite 23dB

At BenQ, we believe a low noise environment is important for that real home cinematic experience! That's why the PE8720 operates at a whisper-quiet 23dB for your uninterrupted viewing and listening pleasure.



1. Side-exhaust Fans

BenQ patented side-exhaust fans lower the internal ambient temperature allowing for efficient cooling, thus reducing fan RPM (revolutions per minute).

2. L-shaped inlet tunnels

To further reduce projector acoustics, BenQ has adopted two L-shaped inlet tunnels equipped with a sound dampening muffler and anti-vibration material in the Color Wheel holder.

Easy Installation

Another Handy Innovation from BenQ

Most people don't know what half the functions are on their remote control. On the other hand, with the PE8720's remote control you get half the complications, but twice the precision control. You have to hand it to our engineers.

1. **Source hot keys**
   Selects an input source: COMP1, COMP2, VIDEO, HDMI, RGB HD, S-VIDEO.
2. **Aspect buttons**
   Selects the image aspect ratio: ANA, 4:3, LB, WIDE, REAL.
3. **Preset modes buttons**
   Switch to different preset modes quickly and easily without window after window of OSD menus.
4. **Memory buttons**
   Restores settings saved in memory location 1, 2 and 3 or Default for the current input source.
5. **Picture quality adjustment buttons**
   Easily adjusts the brightness, contrast, color and tint.
6. **IRIS button**
   Displays the settings bar for the adjustment of the motorized aperture lens iris.
7. **Backlight button**
   Easy operation in dark room.

Front Vented Exhaust

Logically placed side inlets and a front vented exhaust fan provide users with greater installation flexibility. The front facing exhaust design means that the PE8720 can be placed on a narrower site than those with side vents.

Your Ultimate Home Theater

There's one more thing that makes owning a BenQ projector a rewarding experience. BenQ's commitment to design detail extends to its host of user-friendly functions and hassle-free operation. Surfing, gaming or watching movies - the PE8720 completes any serious home theater environment.

Unique concave designed back panel enable connector heads to be hind perfectly and the wires can be bended smoothly.

Elegant rear cable cover hides cable clutter.

Side panel access for easy lamp and dust filter replacement.